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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Appl. No. : 09/732,391  
Applicant : Spurgeon, James D.  
Filed : December 7, 2000  
TC/A.U. : 2178  
Examiner : DOUG HUTTON

Confirmation No.9867

Title : BELLOWS TYPE MECHANICAL SEAL

Docket No. : 32040US1  
Customer No. : 000116

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Technology Center 2100

APPELLANT'S REPLY BRIEF

Sir:

This communication is submitted in response to Examiner's Answer mailed February 20, 2004. The two month time period for filing this brief under 37 CFR § 1.193(b)(1) expires April 20, 2004.

Appellant's Appeal Brief and Supplemental Brief present arguments to the Board that, in making each rejection, the Examiner has either failed to show all elements of the claim in the prior art, or has made no showing of motivation or a suggestion in the prior art and instead relies upon hindsight. The Examiner has responded to these arguments in the Answer and thus the following comments are provided in reply thereto.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Appeal Brief- Patents, Commissioner for Patents, P.O. Box 1450, Alexandria VA 22313-1450 on the date indicated below.

Aaron A. Fishman

Name of Attorney for Applicant(s)

Signature of Attorney

March 22, 2004

Date

The present invention uses a sealing assembly comprising a resilient bellows having a plurality of corrugations. In the Answer, to support his rejection of the Group I claims, the Examiner has attempted to provide motivation to incorporate the Jenkins "double corrugation" bellows into the Donley design by arguing Jenkins would teach one of ordinary skill in the art that the "double corrugation" bellows is "springier" than the single corrugation bellows, thereby providing a tighter seal (see Office action, paper no. 16, pages 5-6). Examiner's argument is not supported by the language of Jenkins. Jenkins indicates that the stainless steel bellows is more resilient than the brass or copper alloy bellows of FIG. 2, not because of the number of corrugations, as argued by the Examiner, but because of the nature of the materials. Nowhere in Jenkins is it asserted that the additional corrugation of the bellows shown in FIG. 3 has been included to provide additional resiliency for forming a better seal.

Further, Jenkins states that the substitution of a resilient bellows is made to eliminate the need for the helical springs 37. Since the helical springs urge the bellows ends away from the mating rubber rings, it is clear that the springs do not improve the sealing of the rubber rings. Rather, Jenkins states that the helical springs used with the nonresilient bellows are provided to maintain the seal between the packing ring 21 and the mating ring 17 (column 3, lines 65-73). This function would also apply to the resilient bellows substituted therefor. Jenkins makes no reference to the springs or the resilient bellows being required to provide a seal between the bellows and the rubber rings in either the FIG. 1 or the FIG. 2 designs.

As previously mentioned, the Examiner argues that one of ordinary skill would be motivated to improve the static seals in Donley by providing a "springier" bellows from Jenkins. However, since, as explained above, the resiliency of the Jenkins bellows is not

provided to improve the sealing of the rubber rings, there is no support in the prior art for the Examiner's assertion.

Finally, the Examiner persists in arguing that claim 24 of the present application, the Group III claim which recites a method of forming a resilient bellows for a sealing system, is rejected as a product-by-process claim. The Examiner seems to argue that merely because the steps recited in the claim are broad ("forming a bellows having a corrugated hollow body" and "folding an end of the body inwardly to form a collar for receiving a plate", see paper no. 15, page 19), they cannot be considered a manufacturing process, and the claim is therefore a product-by-process claim (see paper no. 16, page 12). This argument lacks both logic and legal authority. Clearly, claim 24's recited steps for producing the resilient bellows meet the Supreme Court's frequently-quoted definition of a process in that it is "a mode of treatment of certain materials to produce a given result," and is "a series of acts, performed upon the subject matter to be transformed and reduced to a different state or thing." *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1877).

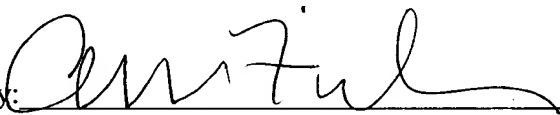
The process recited in method claim 24 is not fully disclosed in either Donley or Jenkins. Specifically, neither reference discloses a step in which the end of the bellows body is folded inwardly to form a collar for receiving a plate. Therefore, the method claim is neither anticipated by Donley or Jenkins, nor is it rendered obvious by a combination of the two references.

In conclusion, it is emphasized by Appellant that each of the modifications and combinations proposed by the Examiner to reject the above claims are founded in a hindsight reconstruction of the invention, in which the Examiner has sorted through the cited references to pick and choose those elements which may be combined to produce the claimed sealing system. In all instances, the Examiner has either failed to provide an actual

motivation or suggestion to combine these references, as required to support a *prima facie* case of obviousness, or he has alleged a motivation that has no evidentiary basis. Further, the Examiner has improperly classified method claim 24 as a product-by-process claim in order to make an obviousness rejection of the bellows produced by the claimed process. In doing so, the Examiner has failed to show any prior art references that anticipate or render obvious the claimed method of forming this bellows.

Respectfully submitted,

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